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150313

DATE: AUG 21, 1995

TO: WAM: S. BURCHETTE

FROM: Y. Lin, REAC Organic Lab Group Leader *[Signature]*

SUBJECT: Preliminary results of Project SPECTRUM / GALAXY, WA#0- 134

Attached please find the preliminary results of the above referenced project for the following samples:

Chain(s) of Custody No.: 10280, 10282, 10285
Analyses: VOC + MEK
No. of Samples: 24
Matrix: AIR

CARBON Tube Results

cc: Y. Lin
Central File
B. Lewan
Task Leader:
Analyst:

M. METZ
J. SYSLO

AR300914

Narrative: Spectrum Galaxy Site-0134
ERT GC/MS Method 1500, 1501, 1003

with Methyl Ethyl Ketone

Between 8/7/95 and 8/10/95 REAC received a total of 24 carbon tube air samples from the Spectrum Galaxy Site for air analysis. The samples were analyzed using the HP5995 Mass Spec and standard GC/MS modified NIOSH carbon tube method.

The WAM had requested an additional compound, methyl ethyl ketone to be included in this analysis. Once it was determined that the compound could be detected using the current analytical column, and temperature program, the compound was spiked on the carbon tubes, and desorption efficiencies obtained. A calibration range was also constructed for this compound using the same levels of the normal VOC compounds. The data files were quantitated for the normal VOC compounds, and then for MEK only. There is another compound, benzonitrile in the ID file for MEK, but this is for another project, and should be ignored.

There was no MEK found in any samples, nor any significant levels of target compounds.

There were two lot blanks, and two field blanks provided. When a lot blank was not provided, the lab extracted one and included it with the data. Three MS/MSD pairs was extracted and analyzed; one with each chain of custody. If one was not provided, a lab lot blank was spiked and extracted. Two of the MS/MSD pairs were spiked with MEK, with results between 40 to 89 % recovery.

Samples and blanks contained small levels of toluene in both the front and backs of the tubes. This was considered lab contamination. The toluene was subtracted out using the lot blanks as a reference.

The TIC reports did not contain any compounds except for sample 01595 120 Providence Road. The TIC report showed a small amount of a Pinene compound (~6 ppb in air), and the target list showed some D- Limonene.

All samples were clean except for the small amounts of toluene which is probably lab contamination. Some samples contained small levels of 1,1,1-trichloroethane and some xylenes.

All samples were analyzed under the normal a 24 hour clock used for this analysis.

AR300915

Sample No. Sampling Location Volume (L)	Q2187 Lat. Mark 0	Q2188 Top Mark 0	Q2189 21 Lido Creek Rd. 475	Q2190 42454 Meade Rd. 476	Q2191 1115 G. 13th Rd. 480	Q2194 1085 G. 13th Rd. 480	Q2195 130 Providence Rd. 480	Q2196 Walling Bridge 476
Compound Name	Conc.	MCL	Conc.	MCL	Conc.	MCL	Conc.	MCL
1,1,1-Trichloroethane	U	10	U	10	U	4	U	3.8
Cyclohexane	U	2.4	U	2.4	U	5.7	U	5.7
Carbon Tetrachloride	U	11	U	11	U	3.8	U	3.7
Benzene	U	2.5	U	2.5	U	6.3	U	6.2
Cyclohexane	U	10	U	10	U	8.4	U	8.3
n-Heptane	U	2.9	U	2.9	U	5.1	U	5.1
1,2-Dichloroethane	U	10	U	10	U	4.6	U	4.6
Trichloroethane	U	2.5	U	2.5	U	3.7	U	3.7
1,4-Dioxane	U	15	U	15	U	9.1	U	9.0
Methylcyclohexane	U	6.7	U	6.7	U	5.1	U	5.1
Methylcyclopentane	U	38	U	38	U	13	U	13
Toluene	U	10	U	10	2.1 J	2.8	1.7 J	2.7
n-Octane	U	10	U	10	U	4.7	U	4.6
Tetrahydrofuran	U	10	U	10	U	3.1	U	3.1
Chlorobenzene	U	11	U	11	U	5.1	U	5.1
Ethylbenzene	U	10	U	10	U	4.9	U	4.9
para-Xylene	U	10	U	10	U	5.1	U	5.1
Bromobenzene	U	18	U	18	U	3.7	U	3.6
Styrene	U	30	U	30	U	18	U	18
ortho-Xylene	U	11	U	11	U	5.4	U	5.3
n-Nonane	U	11	U	11	U	4.5	U	4.4
n-Decane	U	10	U	10	U	4.2	U	4.2
1,1,2,2-Tetrachloroethane	U	12	U	12	U	3.8	U	3.8
Camphor	U	2.4	U	2.4	U	4.0	U	4.0
Mesitylene	U	2.7	U	2.7	U	4.2	U	4.1
Alpha-methylstyrene	U	16	U	16	U	7.7	U	7.6
1,3-Dichlorobenzene	U	11	U	11	U	3.8	U	3.8
1,4-Dichlorobenzene	U	12	U	12	U	4.0	U	4.0
1,2-Dichlorobenzene	U	12	U	12	U	4.3	U	4.3
Benzyl Chloride	U	30	U	30	U	12	U	12
alpha-Terpinene	U	44	U	44	U	17	U	16
D-Limonene	U	11	U	11	U	4.0	U	3.9
4-tert-Butyltoluene	U	2.2	U	2.2	U	3.2	U	3.1
1,2,4-Trichlorobenzene	U	14	U	14	U	4.0	U	4.0
Naphthalene	U	53	U	53	U	21	U	21
4-Phenylcyclohexene	U	10	U	10	U	3.3	U	3.2
n-Dodecane	U	10	U	10	U	3.7	U	3.7
n-Tridecane	U	2.5	U	2.5	U	3.8	U	3.8
n-Tetradecane	U	2.7	U	2.7	U	3.2	U	3.2
n-Pentadecane	U	2.9	U	2.9	U	3.3	U	3.2
n-Hexadecane	U	47	U	47	U	17	U	17
n-Heptadecane	U	10	U	10	U	3.6	U	3.6
n-Octadecane	U	10	U	10	U	2.9	U	2.9
n-Nonadecane	U	10	U	10	U	2.7	U	2.7
n-Eicosane	U	11	U	11	U	2.6	U	2.6
n-Heneicosane	U	11	U	11	U	2.4	U	2.4
Methyl-Ethyl-Ketone	U	17	U	17	U	12	U	12

NO QC EVALUATION HAS BEEN PERFORMED.
DATA VALIDITY IS UNSUBSTANTIATED
AND THE DATA SHOULD BE USED
WITH DISCRETION.

AR300916

Sample No. Sampling Location Volume (L)	92503 Lot Blank 0	92503 Tdy Blank 0	92506 21 Uda Bk Creek Rd. 300	92506 101 Ed Moore Rd. 300	92507 1111 E. Hrs Rd. 300.5	92507 1085 E. Hrs Rd. 300	92508 120 Providence Rd. 300	92508 Wahing Bridge 300	92507 Providence Rd Bridge 720						
Compound Name	Conc.	MDL	Conc.	MDL	Conc.	MDL	Conc.	MDL	Conc.	MDL					
1,1,1-Trichloroethane	U	10	U	10	U	8.2	U	8.2	U	8.2					
Cyclohexane	U	8.4	U	8.4	U	7.8	U	7.8	U	7.8					
Carbon Tetrachloride	U	11	U	11	U	4.9	U	4.9	U	4.9					
Benzene	U	8.5	U	8.5	U	8.3	U	8.3	U	8.3					
Cyclohexene	U	10	U	10	U	8.5	U	8.5	U	8.5					
n-Heptane	U	9.9	U	9.9	U	6.7	U	6.7	U	6.7					
1,3-Dichloropropane	U	10	U	10	U	6.1	U	6.1	U	6.1					
Toluene	U	8.5	U	8.5	U	4.9	U	4.9	U	4.9					
1,4-Dioxane	U	16	U	16	U	12	U	12	U	12					
Methylcyclohexane	U	8.7	U	8.7	U	6.7	U	6.7	U	6.7					
Methylcyclopentane	U	20	U	20	U	18	U	18	U	18					
Toluene	17	10	0.035 J	6.5 J	7.8	2.7 J	7.8	0.02 J	7.8	U	7.8	1.7 J	7.8	0.4 J	7.8
n-Octane	U	10	U	10	U	6.2	U	6.2	U	6.2					
Tetrahydrofuran	U	10	U	10	U	4.1	U	4.1	U	4.1					
Chlorobenzene	U	11	U	11	U	6.7	U	6.7	U	6.7					
Ethylbenzene	U	10	U	10	U	6.5	U	6.5	U	6.5					
para-Xylene	U	10	U	10	U	6.7	U	6.7	U	6.7	0.00 J	6.5	0.00 J	6.5	
Bromobenzene	U	18	U	18	U	4.8	U	4.8	U	4.8					
Styrene	U	30	U	30	U	25	U	25	U	25					
ortho-Xylene	U	11	U	11	U	7.1	U	7.1	U	7.1					
n-Nonane	U	11	U	11	U	5.9	U	5.9	U	5.9					
n-Decane	U	10	U	10	U	5.5	U	5.5	U	5.5					
1,1,2,2-Tetrachloroethane	U	12	U	12	U	5.0	U	5.0	U	5.0					
Camphor	U	8.4	U	8.4	U	5.3	U	5.3	U	5.3					
Methylpropane	U	8.7	U	8.7	U	5.5	U	5.5	U	5.5					
Alpha-methylstyrene	U	16	U	16	U	10	U	10	U	10					
1,3-Dichlorobenzene	U	11	U	11	U	5.9	U	5.9	U	5.9					
1,4-Dichlorobenzene	U	12	U	12	U	5.3	U	5.3	U	5.3					
1,2-Dichlorobenzene	U	12	U	12	U	5.7	U	5.7	U	5.7					
Benzyl Chloride	U	20	U	20	U	16	U	16	U	16					
alpha-Terpinene	U	44	U	44	U	30	U	30	U	30					
D-Limonene	U	11	U	11	U	5.3	U	5.3	U	5.3					
4-tert-Butylphenol	U	8.2	U	8.2	U	4.2	U	4.2	U	4.2					
1,2,4-Trichlorobenzene	U	14	U	14	U	5.5	U	5.5	U	5.5					
Naphthalene	U	83	U	83	U	30	U	30	U	30					
4-Phenylcyclohexene	U	10	U	10	U	4.3	U	4.3	U	4.3					
n-Dodecane	U	10	U	10	U	4.9	U	4.9	U	4.9					
n-Tridecane	U	8.8	U	8.8	U	4.7	U	4.7	U	4.7					
n-Tetradecane	U	8.7	U	8.7	U	4.3	U	4.3	U	4.3					
n-Pentadecane	U	8.9	U	8.9	U	4.3	U	4.3	U	4.3					
n-Hexadecane	U	47	U	47	U	20	U	20	U	20					
n-Heptadecane	U	10	U	10	U	4.9	U	4.9	U	4.9					
n-Octadecane	U	10	U	10	U	3.8	U	3.8	U	3.8					
n-Nonadecane	U	10	U	10	U	3.8	U	3.8	U	3.8					
n-Eicosenane	U	11	U	11	U	3.4	U	3.4	U	3.4					
n-Henicosane	U	11	U	11	U	3.2	U	3.2	U	3.2					
Methyl-Ethyl-Ketone	U	17	U	17	U	10	U	10	U	10					

Unit in total ug.

NO QC EVALUATION HAS BEEN PERFORMED.
DATA VALIDITY IS UNSUBSTANTIATED
AND THE DATA SHOULD BE USED
WITH DISCRETION.

AR300917

Table 1.1 results of VOC Analysis in Air
Concentration Reported as PPS in Air
WA # 0-134 Spectrum Gallery

Sample No. Sampling Location Volume (L)	Lab Blank CCC # 10285 0	1891 21 Little Elk Creek Rd. 372	01 982 424 Ed Moore Rd. 380	01 983 1115 G. Kirk Rd. 380	01 984 1025 G. Kirk Rd. 380	01 985 120 Providence Rd. 380	01 986 Walking Bridge 380	01 987 Providence Bridge 380
Compound Name	Conc.	MCL	Conc.	MCL	Conc.	MCL	Conc.	MCL
1,1,1-Trichloroethane	U	18	U	5.1	U	5.2	U	5.2
Cyclohexane	U	9.4	U	7.3	U	7.8	U	7.8
Carb on Tetrahalide	U	11	U	4.8	U	4.8	U	4.8
Benzene	U	9.5	U	8.9	U	8.3	U	8.3
Cyclohexane	U	18	U	3.2	U	6.5	U	6.5
n-Heptane	U	9.9	U	6.5	U	6.7	U	6.7
1,2-Dichloropropane	U	10	U	5.9	U	6.1	U	6.1
Trihaloethers	U	8.5	U	4.7	U	4.9	U	4.9
1,4-Dioxane	U	15	U	12	U	12	U	12
Methylcyclohexane	U	9.7	U	6.5	U	6.7	U	6.7
Methylcyclopentane	U	28	U	17	U	18	U	18
Toluene	12	18	3.3 J	7.4	1.9 J	7.8	1.4 J	7.8
n-Octane	U	18	U	6.6	U	6.2	U	6.2
Tetrahaloethane	U	18	U	4.0	U	4.1	U	4.1
Chlorobenzene	U	11	U	6.5	U	6.7	U	6.7
Ethylbenzene	U	18	U	6.3	U	6.5	U	6.5
para-Xylene	U	18	U	6.5	U	6.7	U	6.7
Bromobenzene	U	18	U	4.7	U	4.8	U	4.8
Styrene	U	38	U	24	U	25	U	25
ortho-Xylene	U	11	U	6.9	U	7.1	U	7.1
n-Nonane	U	11	U	5.7	U	5.9	U	5.9
n-Decane	U	18	U	5.4	U	5.5	U	5.5
1,1,2,2-Tetrahaloethers	U	12	U	4.9	U	5.0	U	5.0
Cumene	U	9.4	U	5.1	U	5.3	U	5.3
Methylcyclopentane	U	9.7	U	5.3	U	5.5	U	5.5
Alpha-methylstyrene	U	18	U	3.8	U	18	U	18
1,3-Dichlorobenzene	U	11	U	4.8	U	5.0	U	5.0
1,4-Dichlorobenzene	U	12	U	5.2	U	5.3	U	5.3
1,2-Dichlorobenzene	U	12	U	3.5	U	5.7	U	5.7
Benzyl Chloride	U	28	U	19	U	18	U	18
alpha-Terpinene	U	44	U	21	U	22	U	22
D-Limonene	U	11	U	5.1	U	5.3	1.8 J	5.3
4-tert-Butyltoluene	U	9.2	U	4.1	U	4.2	U	4.2
1,2,4-Trichlorobenzene	U	14	U	5.2	U	5.3	U	5.3
Naphthalene	U	33	U	27	U	28	U	28
4-Phenylcyclohexane	U	18	U	4.2	U	4.3	U	4.3
n-Dodecane	U	18	U	4.8	U	4.9	U	4.9
n-Dodecane	U	9.8	U	4.5	U	4.7	U	4.7
n-Undecane	U	9.7	U	4.1	U	4.3	U	4.3
n-Undecane	U	9.8	U	4.2	U	4.3	U	4.3
n-Nonanal	U	47	U	22	U	22	U	22
n-Dodecane	U	18	U	3.9	U	4.0	U	4.0
n-Tetradecane	U	18	U	3.7	U	3.8	U	3.8
n-Tetradecane	U	18	U	3.4	U	3.5	U	3.5
n-Pentadecane	U	11	U	3.3	U	3.4	U	3.4
n-Hexadecane	U	11	U	3.1	U	3.2	U	3.2
Methyl-Ethyl-Ketone	U	17	U	18	U	18	U	18

NO QC EVALUATION HAS BEEN PERFORMED.
DATA VALIDITY IS UNSUBSTANTIATED
AND THE DATA SHOULD BE USED
WITH DISCRETION.

AR300918

TABLE 2.2 Results of Blank Spike and Blank Spike Duplicate
NIOSH VOC's Analysis in Air (Carbon Tubes)
WA # 0-134 Spectrum Galaxy

02187 Lot Blank

Parameter	Spike Added (μ g)	Spike 1		Spike 2		% RPD
		MS Recov. (μ g)	% Recovery	MSD Recov. (μ g)	% Recovery	
Cyclohexane	50.0	48.5	97	44.7	89	8
1,2-Dichloropropane	50.0	42.8	86	39.1	78	9
Bromoform	50.0	50.1	100	50.7	101	1
Mesitylene	50.0	42.0	84	40.9	82	3
1,2,4-Trichlorobenzene	50.0	43.0	86	43.4	87	1
4-Phenylcyclohexene	50.0	41.0	82	39.5	79	4

02203 LOT BLANK

Parameter	Spike Added (μ g)	Spike 1		Spike 2		% RPD
		MS Recov. (μ g)	% Recovery	MSD Recov. (μ g)	% Recovery	
Cyclohexane	50.0	35.8	72	40.5	81	12
1,2-Dichloropropane	50.0	36.0	72	39.8	80	10
Bromoform	50.0	37.0	74	37.3	75	1
Mesitylene	50.0	36.8	74	42.7	85	15
1,2,4-Trichlorobenzene	50.0	34.3	69	40.3	81	16
4-Phenylcyclohexene	50.0	33.6	67	39.1	78	15
Methyl-Ethyl-Ketone	50.0	40.2	80	44.5	89	10

LAB LANK

Parameter	Spike Added (μ g)	Spike 1		Spike 2		% RPD
		MS Recov. (μ g)	% Recovery	MSD Recov. (μ g)	% Recovery	
Cyclohexane	50.0	43.9	88	40.2	80	9
1,2-Dichloropropane	50.0	45.1	90	40.8	82	10
Bromoform	50.0	43.1	86	41.2	82	4
Mesitylene	50.0	46.3	93	42.0	84	10
1,2,4-Trichlorobenzene	50.0	37.4	75	36.9	74	1
4-Phenylcyclohexene	50.0	42.4	85	39.9	80	6
Methyl-Ethyl-Ketone	50.0	19.9	40	23.9	48	18

NO QC EVALUATION HAS BEEN PERFORMED.
DATA VALIDITY IS UNSUBSTANTIATED
AND THE DATA SHOULD BE USED
WITH DISCRETION.

A:\SPEGL\SGMDSRE.WK3

AR300919

CHAIN OF CUSTODY RECORD/LAB WORK REQUEST

Y.F. West Inc.
AC, Edison, N.J.
A Contract 68-03-3482

Project Name: Spectroscopy
Project Number: 03347040001013401
RFV Contact: Mr. Metz
Phone: 321-4200

No: 10280

SHEET NO. 1 OF 1

SAMPLE IDENTIFICATION

ANALYSES REQUESTED

Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Vol %	Volumetric
02181	21 Little Creek Rd	A	8/7/95	1	Class Tube/None	✓	475
02182	424 Ed More Rd					✓	478
02183	1115 G. Kirk Rd					✓	480L
02184	1025 G. Kirk Rd					✓	480L
02185	120 Providence Rd					✓	470L
02186	Waliking Bridge					✓	OL
02187	Lot Blank					✓	OL
02188	Tip Blank					✓	OL

(Mk)

(10)

Special Instructions:

* NIOSH 1003, 1500, 1500
Include MKK as TRC

QA
GML

FOR SUBCONTRACTING USE ONLY
FROM CHAIN OF
CUSTODY #

Sediment	PW. Potable Water	S. Soil	Received By	Date	Time	Items/Reason	Relinquished By	Date	Time
Drum Solids	GW. Groundwater	W. Water							
Drum Liquids	SW. Surface Water	O. Oil							
Other	SL. Sludge	A. Air							
Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Time
Reason	M. Metz	8/7/95	B. Deane	8/15/95	1305	8/15 Analysis	B. Deane	8/15/95	1330

AR300920

CHAIN OF CUSTODY RECORD/LAB WORK REQUEST

Boy F. Weston, Inc.
IEAC, Edison, N.J.
PA Contract 68-03-3482

Project Name: Section 1 (60-10-80)
Project Number: 03347045 D01 013401
RFW Contact: PA 10422 Phone: 942200

No: 10282

SHEET NO. 1 OF 2

SAMPLE IDENTIFICATION

ANALYSES REQUESTED

IC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOL #	VOL (L)
30	02195	21 Little Elk Creek Rd	A	8/8/95	1	Glass Tube/None	✓	360
31	02196	424 Ed Moore Rd	✓	✓	✓	✓	✓	360
32	02197	1115 E. Kirk Rd	✓	✓	✓	✓	✓	358.5
33	02198	1025 E. Kirk Rd	✓	✓	✓	✓	✓	352
34	02199	120 Providence Rd	✓	✓	✓	✓	✓	360
35	02200	Working Bridge	✓	✓	✓	✓	✓	358
36	02201	Providence Rd Bridge	✓	✓	✓	✓	✓	720
37	02202	Triad Blank	✓	✓	✓	✓	✓	0
38	02203	Lot Blank	✓	✓	✓	✓	✓	0

Item:

- Sediment
- Drum Solids
- Drum Liquids
- Other
- PW - Potable Water
- GW - Groundwater
- SW - Surface Water
- SL - Sludge
- S - Soil
- W - Water
- O - Oil
- A - Air

Special Instructions:

* 1010514 1003, 1500/1501
ALL W. 1514 0.5 TIC

FOR SUBCONTRACTING USE ONLY
FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
9/scraps	6/2005	8/10	3/2005	11/05	11/5	9/Analysis	Boyer	11/08	Q.L. 10/1	12/15	12:45

AR300921

Toy F. Weeden, Inc.
IEAC, Edison, N.J.
IPA Contract 68-03-3482

CHAIN OF CUSTODY RECORD/LAB WORK RECORD
Project Name: Spectra
Project Number: 03347040003401
Phone: 84200
RAW Contact: NAME

No: 10205

SHEET NO. 2 OF 2

SAMPLE IDENTIFICATION

ANALYSES REQUESTED

IC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOL *	VOL (L)
1	01591	21 Little Elk Creek Rd	A	8/19/95	1	Class Tube/none	✓	3.72
2	01592	424 Ed Moore Rd					✓	3.60
3	01593	1115 G Kirk Rd					✓	3.60
4	01594	1025 G Kirk Rd					✓	3.60
5	01595	120 Providence Rd					✓	3.60
6	01596	Walking Bridge					✓	3.60
7	01597	Yonkers Bridge					✓	3.60

Special Instructions:

FOR SUBCONTRACTING USE ONLY
FROM CHAIN OF CUSTODY #

Item/Reason	Relinquished By	Date	Received By	Date	Time	Item/Reason	Relinquished By	Date	Received By	Date	Time
Analysis	MMMPM	8/10	B. Debra	8/14/95	11:15	7/A Analysis	B. Debra	8/19/95	Joe L. Davis	8/15/95	11:45

AR300922